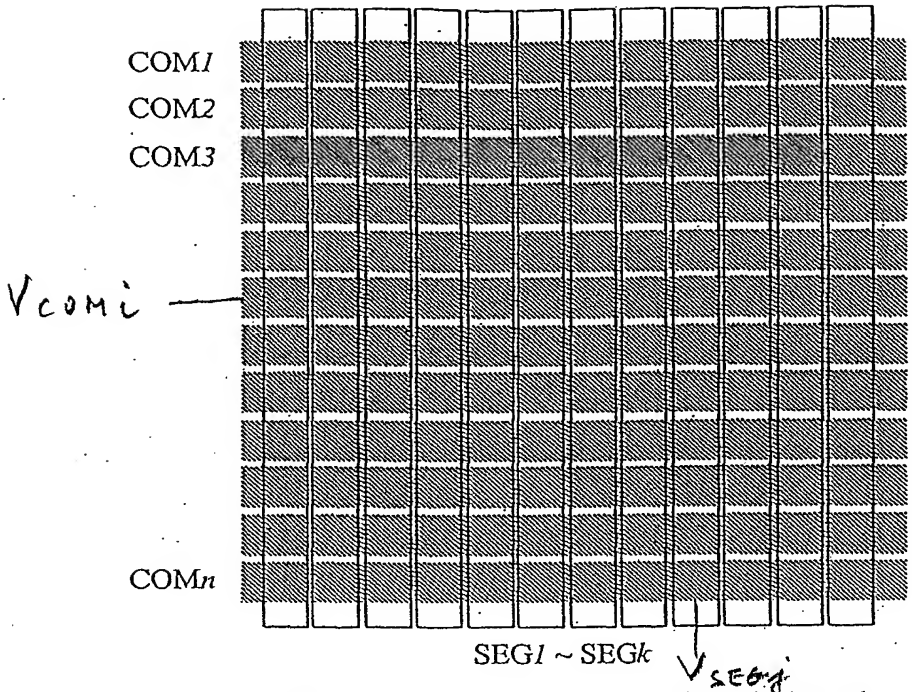

Fig. 1 A see through view of a LCD panel and its ITO electrodes

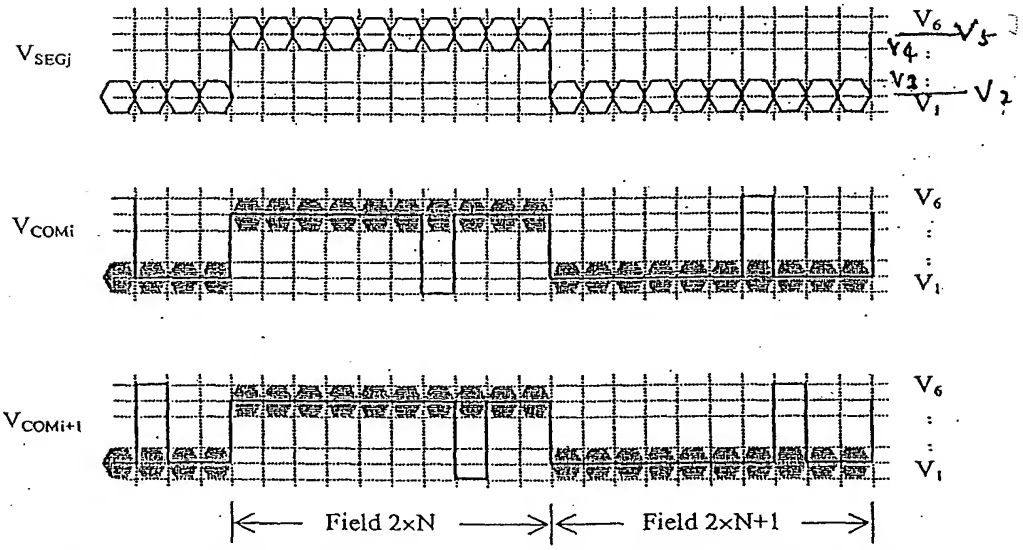

Fig. 2a IAPT driving Wave forms for COM electrodes and SEG electrodes

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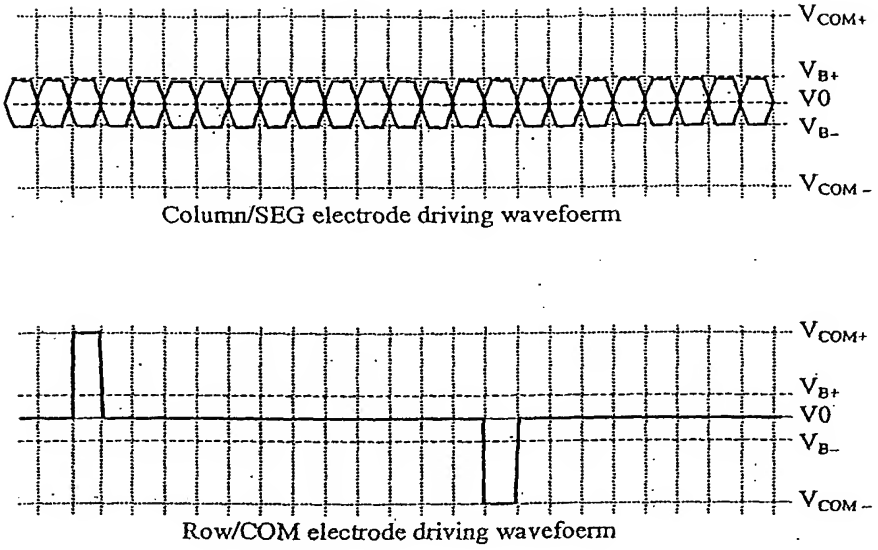

Fig. 2b APT driving Wave forms for COM electrodes and SEG electrodes

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Figures:

2c

Fig. 1 LCD driving curve

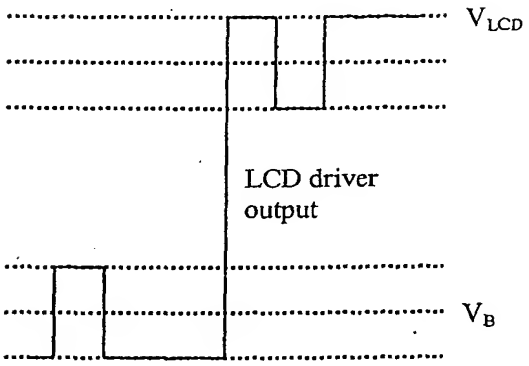


Fig. 3 A capacitor bias ratio generation circuit

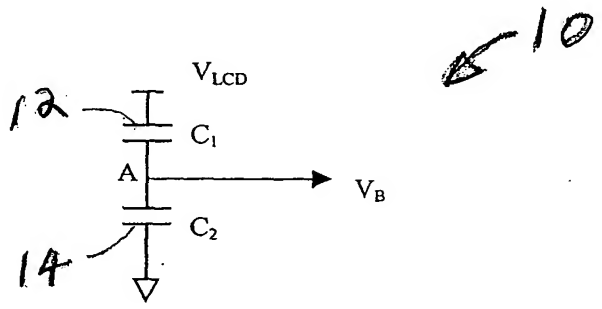


Fig. 4. A capacitor bias ratio circuit with periodic refreshing.

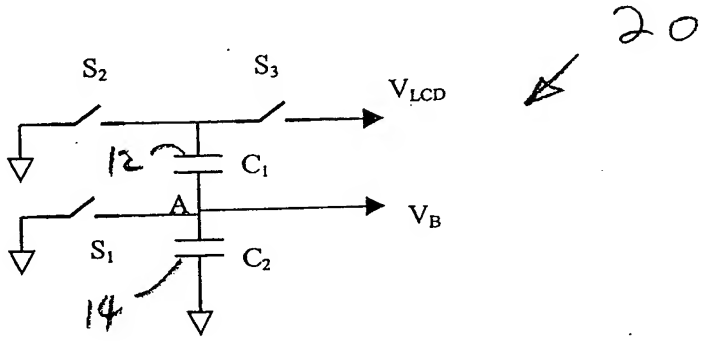
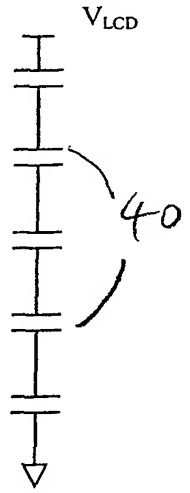


Fig. 5a An alternative capacitor divider bias ratio generation circuits.



Phase 1

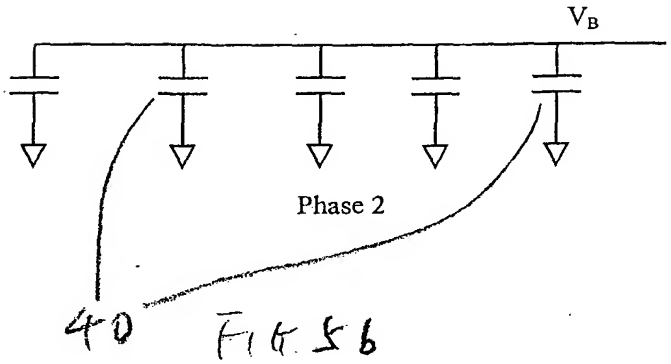


Fig 5b

Figure 6. Detailed Implementation for Figure 5.

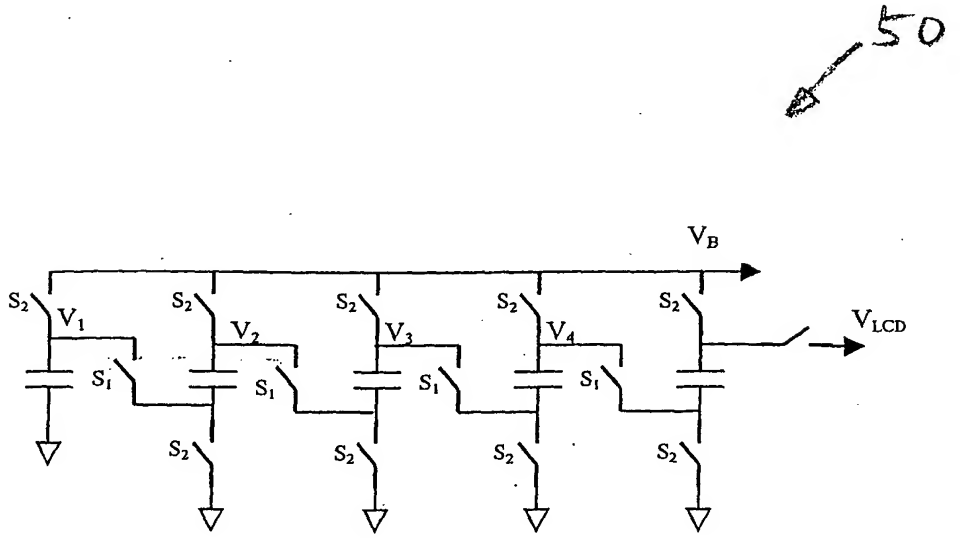


Fig. 7. Direct Drive Capacitor Divider

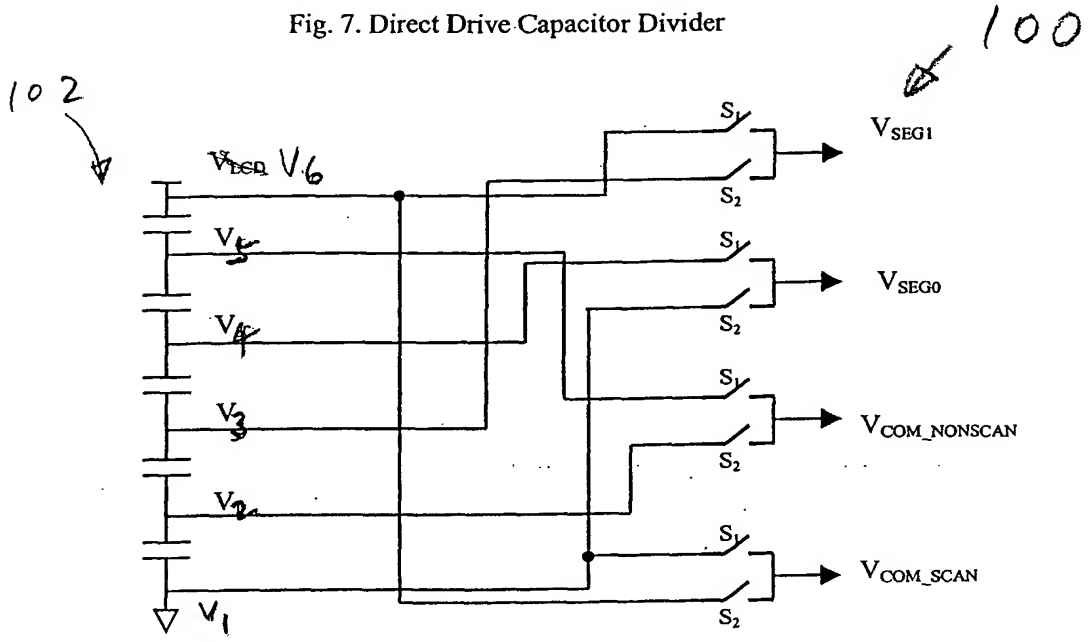


Fig. 8. Direct Drive Capacitor Divider with Four Caps. (BR=4) All the caps are equal.

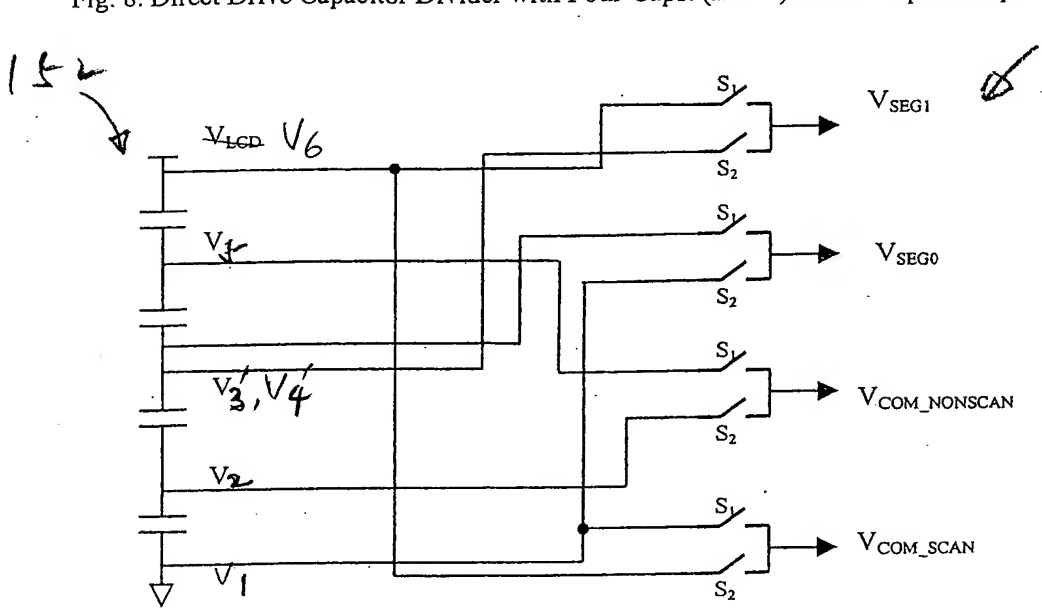


Fig. 9. Direct Drive Capacitor Divider with Three Caps. (BR=3) All the caps are equal.

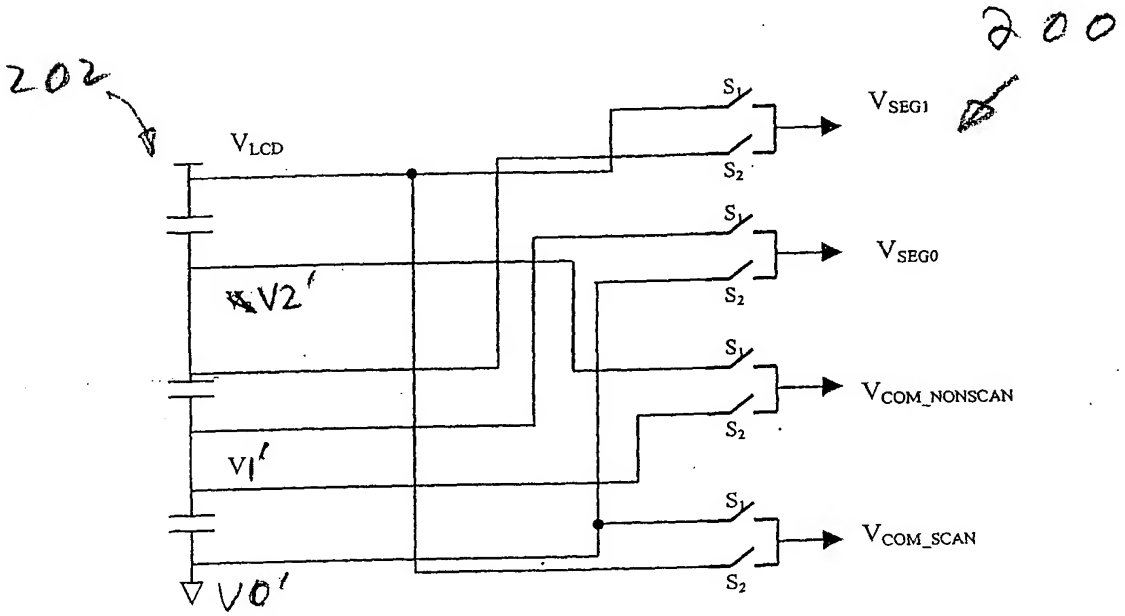


Fig. 10 1/3 LCD driving waveform